

# INTRODUCTION

This guide is about incorporating community values into the design of the new Highway 52 Corridor in Rochester, Minnesota. The goal is a visually successful transportation facility which is in harmony with the community and the environment. Application of engineering standards alone can damage communities. However, when flexibility is used to aid in achieving a balanced road design that responds to people's needs, transportation systems can enhance the quality of our daily lives and be regarded as an asset by the community it serves.

Transportation plays a role in almost everyone's daily life. It is intrinsically woven into the fabric of our existence, encompassing not only how we get from place to place, but also how we conduct our daily routines and the choices we make about what we do. Because transportation is so tied to our daily lives, it provides a perfect opportunity to address the livability concerns of communities. Quality of life in our communities can be influenced by the visual quality of the highway travel experience. Projects that focus on community values and address quality of life issues as part of a comprehensive project development process, add lasting value to public works projects.

This broader view of transportation, as a catalyst for strengthening community life while fulfilling basic transportation goals, has resulted in Minnesota as a leader in transportation design adapting to the changes necessary for successful project development.

## 1.1 Report Purpose

The purpose for developing architectural and aesthetic design guidelines for transportation corridors is to incorporate long-term aesthetic qualities which are context-sensitive, affordable, constructible, visually appropriate and maintainable.

***Context-Sensitive:*** An important concept in highway design is that every project is unique. The setting and character of the area, values of the community, needs of the highway users and the challenges and opportunities are unique factors that must be considered with each project. Whether the design to be developed is for a modest safety improvement or as a completely new urban highway corridor, such as this project, it must be recognized that there are no patented solutions. Each project must be developed to balance the need for safety and efficiency in the design with the need to integrate it into the surrounding natural and human environments. Balancing these qualities promotes excellence in transportation design.

***Affordable:*** While it is certainly easier to design an imaginative project if a reasonable budget

is provided for aesthetic treatments, funds should not always be the sole determining factor. Often, it is difficult to put an actual dollar figure on the quality of life benefits that go with living in pleasant surroundings. Relative to the total cost of an urban highway project, many aesthetic treatments have an impact on community livability that far outweighs their initial cost.

Expenditures for aesthetic elements must also be balanced with the recognition that there is not sufficient funding available to meet the growing transportation and infrastructure needs of the Minnesota's trunk highway system. Transportation needs in excess of available funding necessitates prudent investments in project design, including architectural and aesthetic development. Cooperation and development of solid working relationships that bring an appreciation for aesthetic design early in the planning and design process is the best strategy toward achieving a visually successful project and assembling the financial resources that may become necessary to implement a comprehensive improvement plan for any large scale urban highway project.

***Constructible:*** No discussion of aesthetics is complete without considering constructibility. A design that is functional and aesthetically pleasing is of little value if it is ultimately unbuildable. During the design development phase of this project, all architectural and aesthetic design recommendations must also be considered for their impact upon construction and how they are put together, as well as, how they will look.

***Visually Appropriate:*** Construction of new highway segments and major interchanges offers unique opportunities for development of visual treatments which can have an enormous impact how we view the attractiveness of the places in which we live, work and play. Because the highway corridor landscape is important component of a community's public environment, it is critical that visibility of this area, when viewed from either the roadway or streets of the community, be considered during design process. Thoughtfulness with regard to all of the components that will affect the visual expression of the highway corridor assures not only that road is given its best placement within the area's context, but also takes into account its visual impact on the surrounding area. Visually appropriate design solutions require looking beyond the strict limits of the highway right of way.

***Maintainable:*** Maintenance activities consist of those actions necessary to keep an existing highway facility in good condition. Typically, they include repainting lane and edge lines, repairing surface drainage features, removing accumulated debris, mowing and removing snow. Because maintenance is an on-going activity for all highway corridors, architectural and aesthetic treatments should also consider life-cycle costs, offer opportunities for economy and be resistant to vandalism. Examples of these considerations include: repetition of details that promote ease of maintenance and reduced cost, graffiti coatings and locating light fixtures such that they are not vulnerable to vandalism.

## **1.2 Project Purpose**

The new Highway 52 Corridor is the most important arterial route serving the City of

Rochester. It provides access to many of its largest employers, as well as, to downtown. Trunk Highway 52 also has been identified as an interregional corridor, linking Rochester to Minnesota, its neighbors and beyond. Reconstruction of the Rochester segment of the TH52 Interregional Corridor will enhance the economic vitality of the state and this community by providing a safer and more efficient transportation system within this region.

**Figure 1-1: Project Location** The project is located between 85<sup>th</sup> Street NW on TH52 and 48<sup>th</sup> Street SW on TH63 in Rochester, Minnesota.

The preferred alternative to accomplishing the goals of an improved transportation system within the City of Rochester is complete reconstruction of the existing highway corridor between 85<sup>th</sup> Street NW and South Broadway Avenue (TH63) on TH52, including two-way frontage roads from 37<sup>th</sup> Street NW to 7<sup>th</sup> Street NW and one-way frontage roads from 2<sup>nd</sup> Street SW to 6<sup>th</sup> Street SW. The proposed project will improve the existing four-lane highway to provide three travel lanes in each direction throughout the corridor, upgrade interchanges at 19<sup>th</sup> Street NW, TH14 West, 2<sup>nd</sup> Street SW and 6<sup>th</sup> Street SW and construct new interchanges at 65<sup>th</sup> Street NW, 75<sup>th</sup> Street NW and 85<sup>th</sup> Street NW. It also includes facilities necessary to accommodate bicyclist and pedestrian needs within the corridor. On South Broadway Avenue, the proposed project will construct new interchanges at 40<sup>th</sup> Street SW and 48<sup>th</sup> Street SW.

### **1.3 Existing Conditions**

Like many urban highways, TH52 evolved in the absence of the guiding philosophies that a context-sensitive design approach to project planning, design and construction offers today. Most significantly, this includes a comprehensive project development process that acknowledges the importance of a quality landscape environment in creating sustainable public investment. Context or place-sensitive design puts a premium on design for living. While the existing highway conformed to prevailing federal and state standards which emphasized safety, economy and functionalism, it lacked creation of a highway design that exhibits strong visual character and is sensitive to the context of the surrounding community.

This Aesthetic Design Guide focuses on this concern. As an essential component of the highway development process, it defines the long-range aesthetic vision for the highway corridor. Creation of an Aesthetic Design Review Committee (Aesthetic Committee) for this project was an important first step in support this vision and what is expected to be a partnership effort between Mn/DOT and the City of Rochester.

**Figure 1-2: Existing Visual Character of the Highway Corridor** (1997 Photo by Rochester Post-Bulletin)

## 1.4 Community Involvement

Mn/DOT has the responsibility to create a project for the new Highway 52 Corridor that is in harmony with the community and the environment. The community, through its Aesthetic Committee, has the responsibility of discussing the role of the corridor in serving their community, opportunities and constraints for shaping corridor impacts on the community and identifying other important issues which will affect the design, but which are controlled by local units of government.

Throughout the design process, many opportunities and challenges exist for developing a place sensitive and visually successful project. For communities that are proactive and take initiative, large urban reconstruction projects, such as this, offer many opportunities. They are limited only by imagination. Those identified by the Aesthetic Committee for this project, included the opportunity to:

- ***Evoke a sense of place***  
Create a new highway setting unlike any other, with potential to create a new image for the city
- ***Improve connectivity***  
Use the design of cross-street bridges to restore connections between one part of town and another and provide safe, attractive and convenient ways to move between the places that people live, work and play.
- ***Ensure highway development supports larger city development goals***  
Create streets, sidewalks and public areas that are safe, vibrant and pedestrian friendly.
- ***Broaden the mix of uses***  
Design the highway system to encourage street level activity for pedestrians, cars, bicycles and transit within the public right-of-way.
- ***Preserve and enhance heritage resources***  
Enrich community streetscapes with beautiful detail in paving patterns, plaques that tell the story of the community or with art and ornamentation for cultural or ethnic celebration.
- ***Restore and establish urban ecology***  
Look for opportunities to restore or protect those parts of the natural environment that have been lost over time due to development, such as trees and native vegetation and/or animal habitats.
- ***Strengthen community advocacy and stewardship***  
Recognize the necessity for individual and collective responsibility for creating livable environments.

Large reconstruction projects also offer a variety of challenges to developing a visually distinctive highway corridor or transportation system. One greatest is these, is the challenge of balancing all of the competing needs of the transportation project in the face of limited financial resources. On this project, the City has indicated a willingness to share costs with Mn/DOT when proposed architectural and aesthetic treatments go beyond the aesthetic features typically included as a standard component of a project element. Another challenge is finding better ways of involving the community in the project development process.

## **1.5 Aesthetic Design Process**

To advantage the cause for visually successful highway development, Mn/DOT uses a public involvement process to define issues and recommend aesthetic design solutions. On this project, community representatives, city planning and engineering staff, transportation planning and design professionals from Mn/DOT and several consulting firms to the City of Rochester analyzed visual issues and relationships that influence aesthetic design, developed aesthetic framework principles and prepared the detailed architectural and aesthetic treatment recommendations contained in this document. The recommended design solutions were presented to public officials for approval. What began with a link to the community through an aesthetic design review committee, emerged as a record of decision that now guides the architectural and aesthetic development of this project.

**Figure 1-3: Factors to Consider in the Aesthetic Design Process** Mn/DOT uses public involvement for aesthetic planning in transportation decision-making

## **1.6 Design Elements**

The principle visual design elements used in transportation planning and design include bridges, retaining walls, noise barriers, grading, signing, lighting, landscaping, fencing, ponds and water features, transit facilities and pedestrian and bicycle facilities. The way in which these elements are used will determine the visual expression of the highway corridor. The aesthetic objective is the creation of a highway design that exhibits strong visual character and is place-sensitive, while balancing the qualities that promote excellence in transportation design. Each element in the Highway 52 Corridor is discussed in a separate chapter of this document.

**Figure 1-4: Aesthetic Committee Considerations** Aesthetic framework principles guide potential design solutions for all major highway design elements.

This document does not focus on project funding, project management or other necessary ingredients of comprehensive planning strategy beyond the highway right of way. One initiative

that the Aesthetic Committee discussed at length and identified for City action was the recommendation that a comprehensive, planned framework for development be created within the new highway corridor (Overlay Zoning District) following the proposed highway reconstruction to encourage a high-quality development standard for the buildings and spaces most visible from the highway.

## **1.7 Conclusion**

Planning visions for a visually successful highway facility comes down to individuals cooperating with other individuals in transportation decision-making. The aesthetic design process and aesthetic design guideline documents are important tools to understanding values, recognizing opportunities and creating innovative design solutions that will leave a lasting positive impact on the people that this highway corridor serves and the area it affects.

Within the Highway 52 Corridor, this process resulted in a number of unique design treatments which will add visual distinction to this new transportation facility, including:

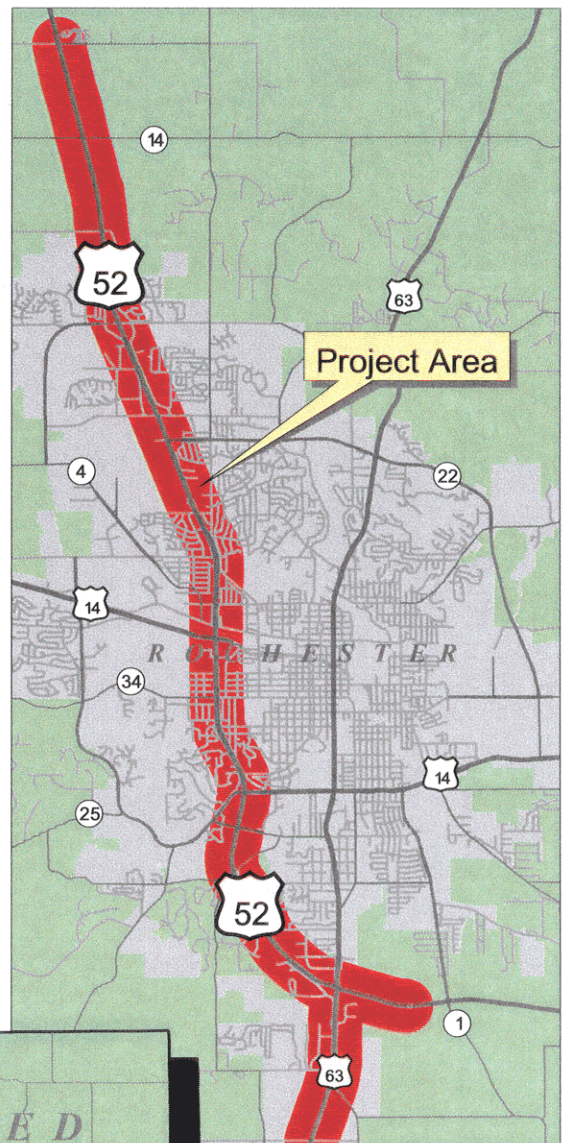
- An design theme suitably rooted in its environmental setting
- “Parkway” identification for the new highway project
- Retaining wall and noise barrier alignment changes to increase community space
- Bridges that announce a sense of arrival to the heart of the community
- Extensive natural planting to restore an Oak Savannah prairie plant community
- An innovative noise barrier design
- Highway sign size and placement that will complement the aesthetic treatment of the route
- Widened bridges that link and join the community with landscaping and pedestrian-oriented amenities
- A signature bridge railing design that adds artistic or sculptural appeal
- An innovative bridge railing lighting scheme to extend its visual appeal into the night
- City streetscapes that are allowed to be beautiful with decorative paving, good lighting, attractive signing and pleasant landscaping
- Amenity treatments that are safe, vibrant and pedestrian friendly

Throughout the aesthetic design process extensive use was made of computer drawing simulations prepared by Mn/DOT's Visualization Unit to guide decisions affecting landscaping, signing and noise barrier designs. These drawings allowed Committee members the opportunity to understand alternatives and the choices available. These are just some of the topics that are presented herein.

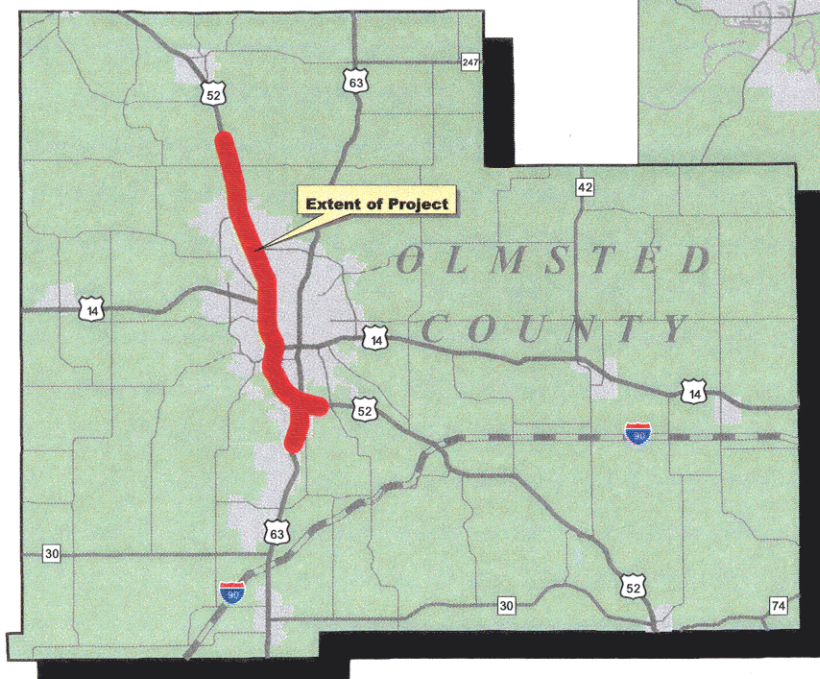
# TH 14/52 Rochester Corridor Project Limits



*Corridor Location*



*Project Area*



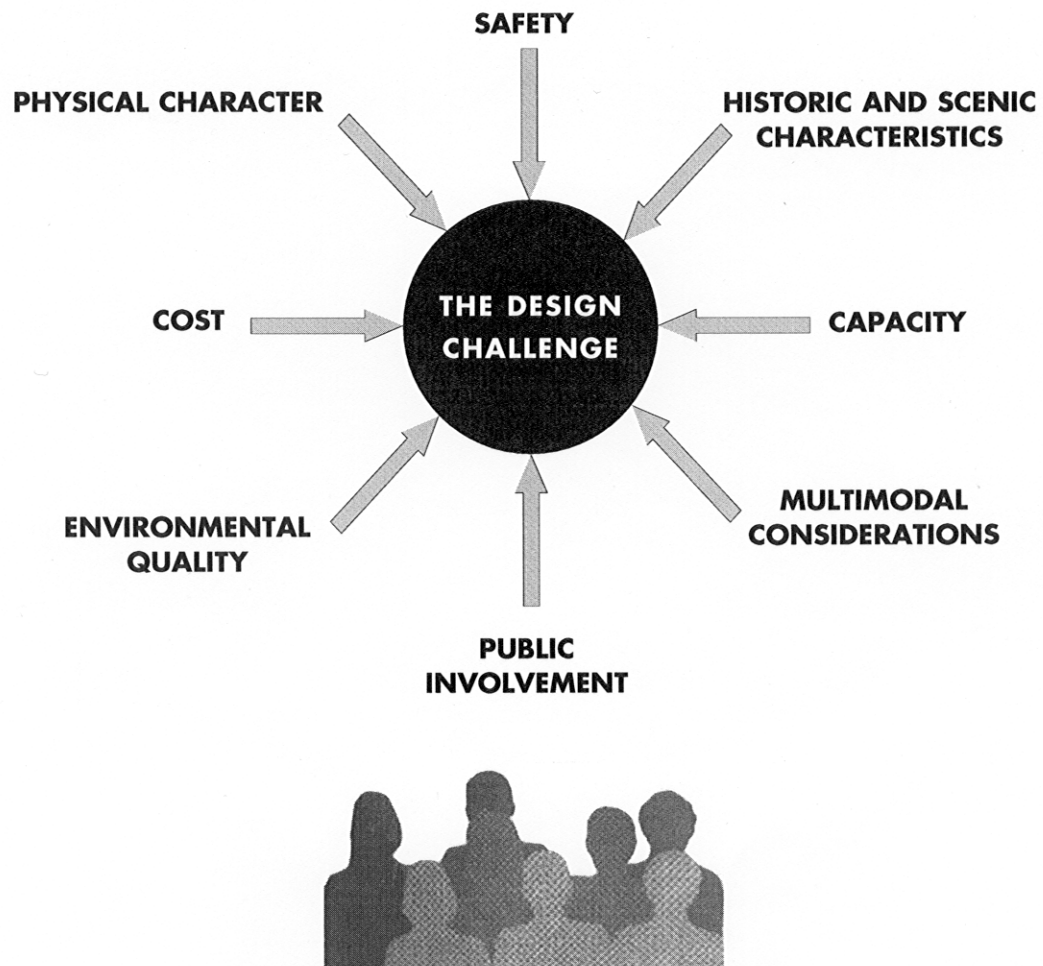
*Extent of Project*

**Figure 1-1: Project Location** The project is located between 85th Street NW on TH 52 and 48th Street SW on TH 63 in Rochester, Minnesota





***Figure 1-2: Existing Visual Character of the Highway Corridor*** (1997 Photo by Rochester Post-Bulletin)



**Figure 1-3: Factors to consider in the Aesthetic Design Process** Mn/DOT uses public involvement for aesthetic planning in transportation decision-making.

## AESTHETIC COMMITTEE CONSIDERATIONS

- Bridges and Structures
- Retaining Barriers
- Noise Barriers
- Grading
- Signing
- Lighting
- Landscaping
- Traffic Barriers
- Fencing
- Storm Water Ponds
- Transit Facilities
- Pedestrian & Bicycle Facilities

**Figure 1-4: Aesthetic Committee Considerations** Aesthetic framework principles guide potential design solutions for all major highway design elements.